Supplementary materials

Disclaimer

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S1: Additional information on the study setting

Study area

      With 3.7 million inhabitants, Berlin is the most densely populated state in Germany. Physicians and laboratories notify clinically suspect and laboratory-confirmed cases of COVID-19 directly to the local health authority (LHA) of residence of the case. With a population of 370,000, Mitte is the district with the second largest population in the state [1].

Public health activities on COVID-19 in the study area

      First cases of COVID-19 were reported to the LHA in Mitte district in the beginning of March 2020. In accordance with the recommendations by the German national public health institute (Robert Koch Institute, RKI), a case was defined as a person with detection of SARS-CoV-2 by PCR in nasopharyngeal or oropharyngeal swab or any other body fluid. Initial exploratory interviews with cases were conducted by the LHA by telephone to assess details on contact persons, potential exposures, risk factors of infection, onset and prevalence of symptoms. At the time of sampling, home isolation of cases was required for a period of at least 14 days. Cases could end the isolation period if they were symptom-free for a minimum of two consecutive days at the end of the initial 14 days.
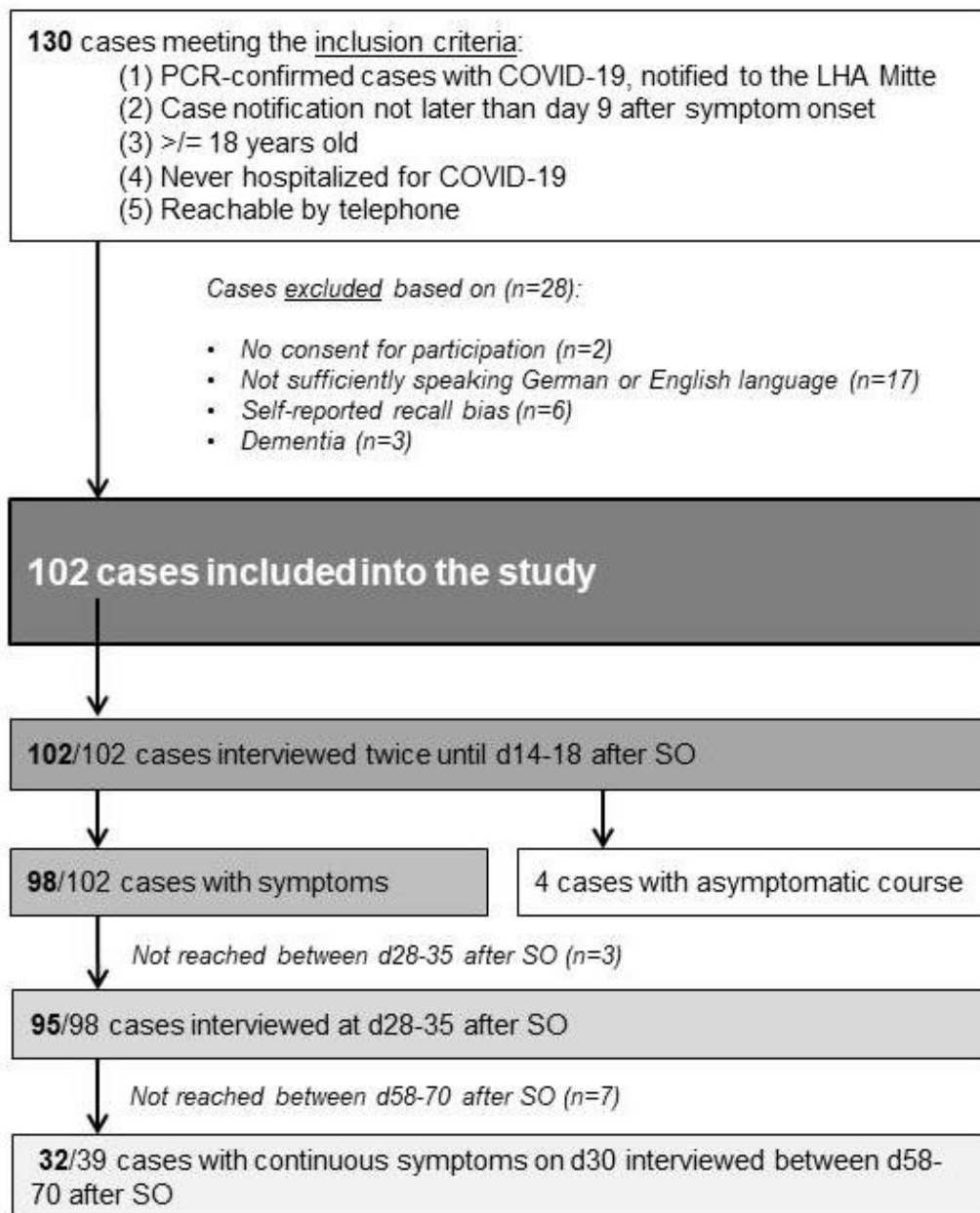
Public health testing recommendations during the study period

      The testing strategy as recommended by Robert Koch Institute (RKI) changed during the study period. From the beginning of the study up to early May, testing for symptomatic patients lacking a known contact to a laboratory confirmed case was only recommended as part of a differential diagnostic work-up, especially for medical staff or patients with known risk factors for a fulminant disease course. Since early May, 2020, testing was expanded to all symptomatic patients including patients presenting with dysosmia or dysgeusia, regardless of their epidemiological link, their occupational activity or their pre-existing condition. Testing was always free of charge (2).

References

1.   *Statistischer Bericht A I 5 – hj 1 / 17, Einwohnerinnen und Einwohner im Land Berlin am 30. Juni 2017. 2017, Amt für Statistik Berlin-Brandenburg: Potsdam.*

2.   *Robert Koch Institute: COVID-19 Verdacht: Testkriterien und Maßnahmen (Testing criteria and measures in pressumed COVID-19 cases). Available on: https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Massnahmen_Verdachtsfall_Infografik_DINA 3.pdf?__blob=publicationFile*

S2: Flowchart depicting inclusion criteria and number of cases interviewed, Berlin, Germany, March to May 2020

130 cases meeting the inclusion criteria:
(1) PCR-confirmed cases with COVID-19, notified to the LHA Mitte
(2) Case notification not later than day 9 after symptom onset
(3) >/= 18 years old
(4) Never hospitalized for COVID-19
(5) Reachable by telephone

Cases excluded based on (n=28):

- No consent for participation (n=2)
- Not sufficiently speaking German or English language (n=17)
- Self-reported recall bias (n=6)
- Dementia (n=3)

102 cases included into the study

102/102 cases interviewed twice until d14-18 after SO

98/102 cases with symptoms | 4 cases with asymptomatic course

Not reached between d28-35 after SO (n=3)

95/98 cases interviewed at d28-35 after SO

Not reached between d58-70 after SO (n=7)

32/39 cases with continuous symptoms on d30 interviewed between d58-70 after SO

Legend:
Sampling period from March 30, 2020 to April 9, 2020 and April 13, 2020 to May 20, 2020
SO = symptom onset

S3: Investigation form (day 1-18, day 30) to assess symptom duration in COVID-19 patients, Berlin, Germany, March to May 2020. The investigation form was in German as telephone interviews were conducted in German. To facilitate interpretation for non-German readers we have labelled the form. Section (A) asks about personal information of the patient (name, date of birth, telephone number). Section (B) refers to demographic, smoking and anthropometric information. Section (C) is for the initials of the interviewer by interview data as well as the exact date of the interview. Section (D) records any comorbidities and use of medication. Section (E) collects information on presence/absence of symptoms (rows) by time (columns) as well as symptom severity for some symptoms. Section (F) ask about hospitalisation, duration and name of the hospital.

Befragung: Klinischer Verlauf bei COVID-19

A
- ID:
- Name:
- Vorname:
- Geburtsdatum:
- Telefonnummer:

B
- Geschlecht (m/w):
- Aktiver Raucher (Zig/Woche/py):
- Ex-Raucher (py):
- Gewicht:
- Größe:

C
| Interviewer: | d7-9: ___ | d14-16: ___ | d28-30: ___ |
| Datum: | d7-9: ___ | d14-16: ___ | d28-30: ___ |

D
- Vorerkrankungen: KEINE ○ COPD ○ KHK ○ NI ○ Nervenerkr. ○
- Asthma ○ Herzinsuff ○ Sonstige:
- Medikation:
- Immuntherapie (aktuell, Vergangenheit)?

E

	1.Tag	2.Tag	3. Tag	4. Tag	5. Tag	6. Tag	7. Tag	8. Tag	9. Tag	10. Tag	11. Tag	12. Tag	13. Tag	14. Tag	15. Tag	16. Tag	17. Tag	18. Tag	28.-30. Tag
Tag des Interviews	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
NA (7) Weiss nicht (8) Missing (9)																			
Wochentag																			
Datum:	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

1. Fieber: nein (0), ja, aber nicht gemessen (1), höchste gemessene Temperatur: °Celsius-Angabe
1.1. Einnahme Fiebersenker (welche:QS)? nein (0) ja (1)
2. Schüttelfrost: nein (0) ja (1)
3. Husten: nein (0) trocken (1) feucht (2) blutig (3)
4. Halssymptome: nein (0) Kratzen (1) Schmerzen (2)
5. Heiserkeit: nein (0) ja (1)
6. Schnupfen: nein (0) ja, verstopft (1), ja, triefend (2)
7. Luftnot: nein (0) In Ruhe (1) Belastung (2)
8. Kopfschmerzen: nein (0) ja (1)
8.1. Kopfschmerzen (Qualität): dumpf (1) pochend (2) stechend (3) undiff 4)
8.2. Kopfschmerzen (Lok.): frontal (1) nuchal (2) holocephal (3) undiff (4)
8.3. Kopf-Sx VAS
9. Rückenschmerzen: nein (0) BWS (1) LWS (2) gesamt (3)
10. Muskel-/Gliederschmerzen: nein (0) ja (1)
11. Brustschmerzen: nein (0) AP (1) Pleuritisch (2) undiff (3)
12. Gelenkschmerzen: (ggf. QS) nein (0) ja (1)
13. Bauchschmerzen: nein (0) Krampfartig (1) Dumpf (2) undiff (3)
13.1. Bauchschmerzen Lok: Oberbauch (1) Unterbauch (2) Gesamt (3)
13.2. Bauchschmerzen VAS
14. Stuhlauffälligkeiten: nein (0) wässrig(1) breiig (2) blutig (3)
14.1. Stuhlauffälligkeiten: Wie oft?
15. Übelkeit: nein (0) ja (1)
16. Erbrechen: nein (0) wie oft:
17. Fatigue (Müdigkeit): nein (0) ja (1)
18. Antriebslosigkeit: nein (0) ja (1)
19. Geruchsminderung: (Beispielgerüche: Kaffee, Desinfektionsmittel) nein (0) mild (1) mäßig (2) total (3)
20. Geschmacksminderung (salzig, bitter, sauer, süß): nein (0) mild (1) mäßig (2) total (3)
21. Taubheitsgefühl Hände & Füße nein (0) ja (1)
22. Hautausschlag (ggf. QS): nein (0) juckend (1) nicht juckend (2)
23. Konjunktivitis: nein (0) ja (1)
24. Krankheitsgefühl nein (0) mild (1) mäßig (2) stark (3)
25. Hyperästhesie? (QS) nein (0) ja (1)
26. Sonstige Symptome (welche): nein (0) ja (1)

F
Wurden Sie wegen COVID im Krankenhaus behandelt (erst "Nein" nach letztem Interview ankreuzen)?
nein (0) ○ ja (1) ○ wenn ja: Beginn: ___ Ende: ___
Name des Krankenhauses: ___ Station: ___

S4: Applied definitions of symptoms in COVID-19 patients, Berlin, Germany, March to May 2020

Symptom:	Definition:
Fever	Self-reported OR measured body temperature =/>38,0°C at least once
Antpyretic agent	Acetylsalicylic acid, ibuprofene, diclofenac, acetaminophen, metamizole, etc.
Chills and rigor	Chills and rigor affecting the whole body
Cough	In chronic cough: increase in the frequency or change in the quality of the cough
Sore throat	Sore throat OR pain while speaking or swallowing
Hoarseness	Voice strongly weakened
Rhinitis	Catarrh („stuffy nose") with OR without secretion, if both are present the more prominent symptom
Dyspnea	Shortness of breath (independent of stuffy nose)
Headache	
Back pain	
Chest pain	Pleuritic pain (breath-related pain) OR tightness of the chest on exertion OR feeling of pressure on the chest
Joint pain	
Abdominal pain	
Changes in bowel habit, diarrhoea	Loose stools independent of frequency
Nausea	
Vomiting	
Fatigue	Extreme tiredness or need for sleep without any sleep deficit and no improvement after sleep
Listlessness	Loss of drive
Dysosmia	Impairment of the sense of smell (independent of stuffy nose)
Dysgeusia	Impairment of at least one of the taste modalities: sweetness, sourness, saltiness, bitterness, savoriness (umami)
Muscle pain	
Numbness of upper and/or lower limbs	Decrease or loss of sensation in upper AND/OR lower limbs
Skin rash	
Conjunctivitis	Prolonged redness of the eyes
Hyperaesthesia	Severe hypersensitivity of the skin (e.g. sunburn-like feeling)
Reduced physical performance capacity	Decrease in physical AND/OR psychological performance in comparison to before COVID-19

S5: Difference between sexes in COVID-19 symptoms, Berlin, Germany, March to May 2020

Symptoms	Day 1-14			Day 30			Day 60		
	Female N = 57	Male N = 41	P-value	Female N = 55	Male N = 40	P-value	Female N = 53	Male N = 35	P-value
Malaise	54 (95%)	38 (93%)	0.7	6 (11%)	1 (2.5%)	0.2	3 (5.7%)	0 (0%)	0.4
Headache	44 (77%)	26 (63%)	0.2	5 (9.1%)	1 (2.5%)	0.4	2 (3.8%)	0 (0%)	0.7
Rhinitis	39 (68%)	29 (71%)	>0.9	2 (3.6%)	1 (2.5%)	>0.9	2 (3.8%)	0 (0%)	0.7
Muscle pain	39 (68%)	25 (61%)	0.6	0 (0%)	0 (0%)	-	1 (1.9%)	0 (0%)	>0.9
Cough	36 (63%)	27 (66%)	>0.9	7 (13%)	4 (10%)	0.8	2 (3.8%)	1 (2.9%)	>0.9
Dysosmia	34 (60%)	25 (61%)	>0.9	14 (25%)	7 (18%)	0.5	9 (17%)	3 (8.6%)	0.4
Fatigue	32 (56%)	21 (51%)	0.8	3 (5.5%)	2 (5.0%)	>0.9	3 (5.7%)	0 (0%)	0.4
Sore throat	28 (49%)	19 (46%)	>0.9	3 (5.5%)	0 (0%)	0.3	1 (1.9%)	0 (0%)	>0.9
Dysgeusia	31 (54%)	14 (34%)	0.075	5 (9.1%)	3 (7.5%)	>0.9	3 (5.7%)	2 (5.7%)	>0.9
Fever	22 (39%)	16 (39%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Back pain	22 (39%)	14 (34%)	0.8	3 (5.5%)	0 (0%)	0.3	1 (1.9%)	0 (0%)	>0.9
Chills	16 (28%)	15 (37%)	0.5	3 (5.5%)	0 (0%)	0.3	2 (3.8%)	1 (2.9%)	>0.9
Dyspnea	17 (30%)	11 (27%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Nausea	22 (39%)	5 (12%)	0.008	1 (1.8%)	0 (0%)	>0.9	1 (1.9%)	0 (0%)	>0.9
Diarrhoea	13 (23%)	14 (34%)	0.3	2 (3.6%)	0 (0%)	0.5	0 (0%)	0 (0%)	-
Joint pain	10 (18%)	10 (24%)	0.6	0 (0%)	0 (0%)	-	1 (1.9%)	0 (0%)	>0.9
Abdominal pain	11 (19%)	6 (15%)	0.7	1 (1.8%)	0 (0%)	>0.9	0 (0%)	0 (0%)	-
Chest tightness	12 (21%)	4 (9.8%)	0.2	3 (5.5%)	0 (0%)	0.3	1 (1.9%)	0 (0%)	>0.9
Listlessness	12 (21%)	4 (9.8%)	0.2	2 (3.6%)	0 (0%)	0.5	0 (0%)	0 (0%)	-
Hyperesthesia	10 (18%)	7 (17%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Pleuritic pain	7 (12%)	2 (4.9%)	0.3	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Hoarseness	5 (8.8%)	3 (7.3%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Rash	4 (7.0%)	2 (4.9%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Vomiting	4 (7.0%)	2 (4.9%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Chest pain, unspecific	3 (5.3%)	2 (4.9%)	>0.9	1 (1.8%)	0 (0%)	>0.9	0 (0%)	0 (0%)	-
Numbness	3 (5.3%)	2 (4.9%)	>0.9	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-
Conjunctivitis	1 (1.8%)	2 (4.9%)	0.6	0 (0%)	0 (0%)	-	0 (0%)	0 (0%)	-

S6: Proportion of COVID-19 patients at day 30 and day 60 after symptom onset who had symptoms already experienced prior, Berlin, Germany, March to May 2020

Symptoms:	Day 30 N = 39	Day 60 N = 18
Abdominal pain	1 (100%)	0 (0%)
Back pain	3 (100%)	1 (100%)
Chest tightness	3 (100%)	1 (100%)
Chest pain, unspecific	0 (0%)	0 (0%)
Rhinitis	3 (100%)	2 (100%)
Cough	10 (91%)	3 (100%)
Diarrhoea	2 (100%)	0 (0%)
Dysgeusia	8 (100%)	4 (80%)
Dysosmia	20 (95%)	12 (100%)
Dyspnea	1 (33%)	2 (67%)
Fatigue	5 (100%)	3 (100%)
Listlessness	1 (50%)	0 (0%)
Headache	6 (100%)	2 (100%)
Joint pain	0 (0%)	0 (0%)
Malaise	7 (100%)	3 (100%)
Muscle pain	0 (0%)	0 (0%)
Nausea	1 (100%)	1 (100%)
Sore throat	3 (100%)	0 (0%)